

Remarks

Claims 8 and 10 through 15, 19, 22-26, and 28-30 are presented for consideration upon entry of the instant amendment which is respectfully requested. Claims 1 through 7, 9, and 16-18, 20, 21, and 27 have been cancelled without prejudice.

The Office Action objects to the specification because of lack of support for the limitations for the displacement unit having an oblong shape as amended in claims 1 and 19. Claims 8 and 19 are amended to replace "oblong" with "elongated". Support for the amendments to claims 8 and 19 are found at least on page 3, lines 23-25. Reconsideration and withdrawal of the objection are respectfully requested.

Claims 8, 10-15, 19, and 22-26 stand rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the enablement requirement. The Office Action asserts that the claims are amended to include the limitation of the displacement unit being oblong shaped which is not supported by the specification. Claims 8 and 19 are amended to replace "oblong" with "elongated". Support for the amendments to claims 8 and 19 are found at least on page 3, lines 23-25. Claims 10-15 depend from claim 8, and claims 22-26 now depend from independent claim 19. Claims 22-26 are amended to depend from claim 19 because they previously depended from claims 21-22 that are canceled. Reconsideration and withdrawal of the rejection are respectfully requested.

Claims 8, 9, 11, 14, 16-21, 23, 25, and 27 are rejected under 35 U.S.C. §102(b) as anticipated by U.S. Patent No. 3,292,901 to Donaldson ("Donaldson"). Claims 9, 16-18, 20, 21, and 27 are canceled rendering the rejection thereto moot.

Independent claims 8 and 19, as amended, recite, in part, "an elongated displacement unit." This feature is important since it minimizes pressure variations and, thus, the adverse effects noted on pages 2-3 of the present application.

Donaldson provides "body means 62 is substantially frusto-conical in configuration..." (col. 4, lines 51-52). Donaldson further provides "I should be in the range of approximately 20% to approximately 50% of D." (col. 3, lines 59-61).

Thus, Donaldson fails to disclose or suggest an elongated displacement unit, as recited by claims 8 and 19. Therefore, Donaldson fails to disclose or suggest all of the features of independent claims 8 and 19.

Claims 11 and 14 depend from claim 8 and claims 23 and 25 depend from claim 19, and, therefore, are patentable over Donaldson for at least the reasons described above for independent claims 8 and 19. Reconsideration and withdrawal of the rejections are respectfully requested.

Claims 8, 11, 15, 19, 23, and 26 are rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 1,919,376 to Moody ("Moody '376") in view of U.S. Patent No. 2,262,191 to Moody ("Moody '191").

As discussed above, independent claims 8 and 19, now recite, in part, "an elongated displacement unit." Again, this feature is important since it minimizes pressure variations and, thus, the adverse effects noted on pages 2-3 of the present application.

In contrast, Moody '376 merely provides "a conical core 27" as shown in Figure 1. Conical core 27 of Moody '376 does not serve to prohibit the adverse effects noted on pages 2-3 of the present application, in particular, prohibiting the development of vortices. Moody '376 provides "... in each passage sudden enlargements and rapid curvatures of walls which would permit the flow to separate from the walls are avoided for both directions of flow. By these means the machine incorporates a discharge passage which will act as an efficient diffuser or regainer of kinetic energy whichever direction of flow is considered." (page 2, lines 73-81).

Moody '376 further provides that "[t]he runner blade passages are designed in accordance with the principles herein outlined as is also the case with the adjustable guide vanes 54 and fixed vanes 55." (page 3, lines 68-73). Thus, the device of Moody '376 is designed to allow operation of the turbine for both directions, e.g., as a pump and as a turbine. Therefore, Moody '376 fails to disclose or suggest an elongated displacement unit, as recited in claims 8 and 19.

The device of Moody '191 prevents vibration caused by cavity. (page 1, lines 20-44). Moody '191 provides "[o]ne of the vanes, namely the vane 5', is provided with a passage or opening 6 extending longitudinally therethrough which opens out at its discharge and into a chamber 7 formed at the inner junction of the various guide vanes 5." (page 2, lines 63-66). Thus, Moody '191 provides a chamber 7 that introduces air into water. (page 2, lines 24-33, 63-66). Therefore, the chamber of Moody '191 does not serve to prohibit the adverse effects noted on pages 2-3 of the present application, in particular, prohibiting the development of vortexes, and is only used to introduce air from its opening. The chamber of Moody '191 merely possesses a stream line shape. Even without the introduction of air, the vanes and the chamber of Moody '191 could not achieve the objective of the present invention. Accordingly, Moody '191 also fails to disclose or suggest an elongated displacement unit, as recited in claims 8 and 19.

In addition, Moody '191 is directed to a pump, in contrast to a water turbine or water pump turbine, as recited in claims 8 and 19.

Therefore, Moody '376 and Moody '191, alone or in combination, fail to disclose or suggest the features of claims 8 and 19. Claims 11 and 15 depend from claim 8 and claims 23 and 26 depend from claim 19, and, therefore, are patentable over Moody for at least the reasons described above for independent claims 8 and 19. Reconsideration and withdrawal of the rejections are respectfully requested.

Claims 15 and 26 are rejected under 35 U.S.C. §103(a) as being unpatentable over Donaldson.

As discussed above, Donaldson fails to disclose or suggest an elongated displacement unit, as recited by claims 8 and 19. Claim 15 depends from claim 8 and claim 26 depends from claim 19, and, therefore, are patentable over Donaldson for at least the reasons described above for independent claims 8 and 19. Reconsideration and withdrawal of the rejections are respectfully requested.

New dependent claim 28 provides that the elongated displacement body has an outer surface that is contacted by flowing water. Support for claim 28 is found at least on page 3, lines 30-31. Applicants respectfully submit that dependent claim 28 is patentable over the cited art. In particular, Donaldson provides that the liquid from the runner flows through a bore. (col. 1, lines 42-45; col. 3, lines 4-8, 54-65).

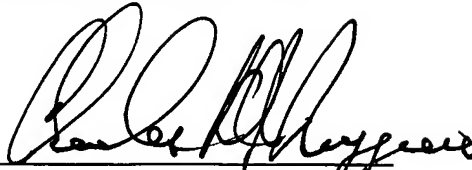
New dependent claim 29 provides that the elongated displacement body is greater in length than in width. Support for claim 29 is found at least in Figures 1, 3a, 4a, and 5-8. Applicants respectfully submit that dependent claim 29 is patentable over the cited art. In particular, Donaldson provides that the dimensions of the body member are restricted. (col. 3, lines 54-68).

New dependent claim 30 provides that the elongated displacement body has a shape of a shell or a rounded shape. Support for claim 30 is found at least on page 7, lines 10-11. Applicants respectfully submit that dependent claim 30 is patentable over the cited art. In particular, none of the cited art discloses or suggests that the elongated displacement body has a shape of a shell or a rounded shape.

In view of the above, it is respectfully submitted that the present application is in condition for allowance. Such action is solicited. In the alternative, it is believed that this Amendment places the present application in better condition for appeal. Accordingly, entry and consideration of this Amendment are respectfully requested.

Respectfully submitted,

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A handwritten signature in black ink, appearing to read "Charles N.J. Ruggiero", written over a horizontal line.

Charles N.J. Ruggiero, Esq.

Registration No. 28,468

Attorney for Applicants

Ohlandt, Greeley, Ruggiero & Perle, LLP

One Landmark Square, 10th Floor

Stamford, CT 06901-2682

Tel: (203) 327-4500

Fax: (203) 327-6401